



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,259	06/29/2004	David Nagi	LC 0155 PUS	4258
36014 7590 09/26/2007 ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			EXAMINER HUSON, MONICA ANNE	
			ART UNIT 1732	PAPER NUMBER
			MAIL DATE 09/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/710,259

Applicant(s)

NAGI ET AL.

Examiner

Monica A. Huson

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 062904.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 1732

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-16, drawn to a method for plastic injection, classified in class 264, subclass 328.7.
- II. Claims 17-20, drawn to a system for injection molding, classified in class 425, subclass 542+.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process, such as one that does not require injecting a quantity of plastic material into the mold cavity.

During a telephone conversation with John A. Artz on 27 August 2007 a provisional election was made with oral traverse to prosecute the invention of Group I, claims 1-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (U.S. Patent 5,500,166). Regarding Claim 1, Sasaki et al., hereafter "Sasaki," show that it is known to carry out a method for plastic injection molding (Abstract) comprising providing a mold cavity to form a plastic molded part with a predetermined surface area and injecting a quantity of plastic material into said mold cavity (Column 10, lines 6-7); reducing the cross section of the mold cavity (Column 11, lines 41-54); allowing the plastic material to

Art Unit: 1732

cool in the mold cavity (Column 12, lines 18-19); and ejecting the molded part from the mold cavity (Column 12, lines 27-29). Sasaki does not specifically show reducing the cross section of the mold cavity at least 50% and a method wherein the molded part has thin walled sections at least 50% of its surface area. However, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (See MPEP 2145.05 (II)(A)). Therefore, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to reduce the cross section by any applicable amount, such as that claimed, during Sasaki's molding method in order to produce an article which meets exclusive customer specifications.

Regarding Claim 3, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not specifically show reducing the cross section of the mold cavity at least 75%. However, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (See MPEP 2145.05 (II)(A)). Therefore, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to reduce the cross section by any applicable amount, such as that claimed, during Sasaki's molding method in order to produce an article which meets exclusive customer specifications.

Regarding Claim 4, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the quantity of material injected into the mold cavity is less than the full amount to fill the mold cavity (Column 17, lines 25-35; It is interpreted that since the mold cavity which the resin is injected into is larger than the size of the final part, the amount of plastic injected into the mold cavity will be less than the initial cavity volume.), meeting applicant's claim.

Regarding Claim 5, Sasaki shows the process as claimed as discussed in the rejection of Claim 4 above, including a method wherein said step of reducing the cross section of the mold cavity operates to completely fill the mold cavity with plastic material (Column 11, lines 50-54), meeting applicant's claim.

Regarding Claim 9, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of ejecting the molded part comprises opening the mold and removing the molded part (Column 12, lines 19-40), meeting applicant's claim.

Regarding Claims 10 and 11, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the cross section of the mold cavity is reduced to provide a part with a certain wall thickness (Column 41-67). Although Sasaki does not particularly discuss the claimed wall thickness value, where the general conditions of a

Art Unit: 1732

claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (See MPEP 2145.05 (II)(A)). Therefore, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to reduce the cross section to a wall thickness such as that claimed during Sasaki's molding method in order to produce an article which meets exclusive customer specifications.

Claims 2, 6-8, and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki, in view of Kreuttner (U.S. Patent 4,447,372).

Regarding Claim 2, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show reducing the cross section of the mold cavity using a piston member in the cavity. Kreuttner shows that it is known to carry out a method wherein the cross section of the mold cavity is reduced by movement of a piston member in the mold cavity (Column 3, lines 3-30, 54-59). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Kreuttner's pistons in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface.

Regarding Claim 6, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show two piston members in the mold cavity. Kreuttner shows that it is known to carry out a method wherein said cross section of the mold cavity is reduced by movement of at least two piston members in the mold cavity (Figure 4, elements 1, 2, 8). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Kreuttner's pistons in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface.

Regarding Claim 7, Sasaki shows the process as claimed as discussed in the rejection of Claim 6 above, but he does not show two piston members in the mold cavity. Kreuttner shows that it is known to carry out a method wherein the at least two piston members are positioned in the same side of the mold cavity (Figure 4, elements 2, 8). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Kreuttner's pistons in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface.

Regarding Claim 8, Sasaki shows the process as claimed as discussed in the rejection of Claim 6 above, but he does not show two piston members in the mold cavity. Kreuttner shows that it is known to carry out a method wherein the at least two piston members are positioned opposed to one another in said mold cavity (Figure 4, elements 1, 2). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use

Art Unit: 1732

Kreuttner's pistons in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface.

Regarding Claim 12, Sasaki shows that it is known to carry out a method for plastic injection molding (Abstract) comprising providing a mold cavity to form a plastic molded part with a predetermined surface area and injecting a quantity of plastic material into said mold cavity (Column 10, lines 6-7); reducing the cross section of the mold cavity (Column 11, lines 41-54). Sasaki does not show reducing the cross section of the mold cavity using a piston member in the cavity. Kreuttner shows that it is known to carry out a method wherein the cross section of the mold cavity is reduced by movement of a piston member in the mold cavity (Column 3, lines 3-30, 54-59). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Kreuttner's pistons in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface.

Regarding Claim 13, Sasaki shows the process as claimed as discussed in the rejection of Claim 12 above, including a method further comprising the step of ejecting the molded part comprises opening the mold and removing the molded part (Column 12, lines 19-40), meeting applicant's claim.

Regarding Claim 14, Sasaki shows the process as claimed as discussed in the rejection of Claim 12 above, including a method wherein the quantity of material injected into the mold cavity is less than the full amount to fill the mold cavity (Column 17, lines 25-35; It is interpreted that since the mold cavity which the resin is injected into is larger than the size of the final part, the amount of plastic injected into the mold cavity will be less than the initial cavity volume.), meeting applicant's claim.

Regarding Claims 15 and 15, Sasaki shows the process as claimed as discussed in the rejection of Claim 12 above, including a method wherein the cross section of the mold cavity is reduced to provide a part with a certain wall thickness (Column 41-67). Although Sasaki does not particularly discuss the claimed wall thickness value, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (See MPEP 2145.05 (II)(A)). Therefore, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to reduce the cross section to a wall thickness such as that claimed during Sasaki's molding method in order to produce an article which meets exclusive customer specifications.

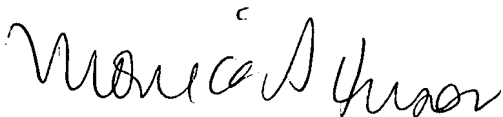
Art Unit: 1732

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Monica A Huson

September 16, 2007